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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,566

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EXAMINER

BRUTUS, JOEL F

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,566	Applicant(s) ABASCAL, JEAN	
	Examiner JOEL F. BRUTUS	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams (US Pat: 4,762,002).

Regarding claim 1-3 and 10, Adams further teaches a system that includes a hand-held ultrasonic probe 10, circuitry 12 for both pulsing and receiving signals from the probe that propagates ultrasonic energy into a subject that anticipates the claimed invention. Adams further teaches the system responds to ultrasonic echoes thereby generated to produce a sector image 26 corresponding to the pattern of received ultrasonic echoes and indicating internal structure and/or condition of the subject's body [see column 3 lines 30-39]. The system provides a complete sector scan of the patient [see column 5 lines 45-48].

Adams teaches a transducer 18 that is pivotally mounted for rotational movement about an axis 38. More specifically, transducer 18 is mounted to an assembly 40 which is journaled in bearings 42, 44 for rotation about the axis 38, which is substantially perpendicular to the longitudinal axis of the tubular housing portion 30; the assembly is driven by a motor drive shaft [see column 4 lines 28-33]. The axis 38 is the director axis and the transducer would be able to contact the examined structure

Art Unit: 3768

(emphasis added); the generatrix which the transducer has a curved face and spherical [see fig 8-9 and see fig 11] and circular face [see fig 7].

Adams teaches a drive member mounted within the housing that is coupled to the transducer for rocking the transducer about a pivot axis [see column 2 lines 12-15]. As seen in FIG. 8, the transducer 18 is slightly concave and in particular a piezo-electric transducer surface 73 (used as the piezo-electric component, emphasis added) [see column 5 lines 30-32]. Adams teaches the system utilizes piezoelectric transducer elements [see column 1 lines 5-10] and it is well known in the art to have power to focus beams (emphasis added).

Adams teaches probe 10 also includes an ultrasound transmitting window 32 that fits within a flared opening of the cylindrical portion 30. The window 32 is made of a polyethylene which facilitates the passage of ultrasonic energy between the transducer and the exterior of the housing [see column 4 lines 3-15]. In use, the window 32 is held against the subject's body in order to couple ultrasonic energy emanating from the probe to the body [see column 4 lines 3-15]. The interior of the probe 10 in the vicinity of the transducer 18, indicated at reference character 34, defines a cavity filled with a liquid acoustic couplant material [see column 4 lines 3-15] and convex outer surface [see column 6 lines 5-10].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3768

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US Pat: 4,762,002) in view of Mayol et al (US Pat: 5,357,963).

Regarding claim 4, all other limitations are taught as set forth by the above teaching.

Adams doesn't teach a Hall-Effect sensor.

However, Adams teaches an encoder 22 for providing an indication of the azimuthal orientation of the transducer [see column 3 lines 40-44]. The encoder is used for the same purpose of the Hall Effect sensor (emphasis added).

However, Mayol et al teach an encoder that is by accompanied by a detector enabling a determined angular position of the probe to be sensed and the detector may comprise a Hall-effect sensor [see column 3 lines 56-68].

Therefore, one with ordinary skill in the art at the time the invention was made would have been motivated to combine Adams with Mayol et al by using Hall-Effect sensor; in order to locate the transducer with accuracy.

Regarding claims 5-7, all other limitations are taught as set forth by the above teaching.

Adams doesn't teach first and second magnets mounted on a rotary drive plate.

However, Mayol et al also teach the driven member comprises a body fitted with two stub axles that rotate in bearings that define the oscillation axis. The body carries a

Art Unit: 3768

second magnet designed to move, following the other magnet in such a manner as to maintain a minimum gap between them [see column 2 lines 45-48]; the magnet in from of a segment of a cylinder. When the thickness of the magnet is large, it is preferable for it to be in the form of a segment of a sphere, a spherical cap [see column 2 lines 55-61].

Therefore, one with ordinary skill in the art at the time the invention was made would have been motivated to combine Adams with the Mayol et al references by using the first and second magnets, the turntable as a rotary driving plate as taught by Mayol et al; in order to allow the transducer to rotate in a desired direction and to sector scan the region of interest with great accuracy.

Regarding claim 9, all other limitations are taught as set forth by the above combination.

Adams teaches transducer 18 is mounted to an assembly 40 which is journaled in bearings 42, 44 for rotation about the axis 38, which is substantially perpendicular to the longitudinal axis of the tubular housing portion 30 [see column 4 lines 28-33]. The transducer is partially spherical [see fig 3, 6, 8-9]

Adams also teaches assembly 40 is driven by a motor drive shaft 46 by way of a pair of beveled gears 48, 50. The bevel gear 48 is mounted axially on the shaft 46, the bevel gear 50 being coupled to the transducer assembly 40. A seal is disclosed in the copending application to Molnar prevents fluid from contacting the motor bearings that support the shaft 46 [see column 4 lines 33-39].

Art Unit: 3768

Regarding claim 8, all other limitations are taught as set forth by the above teaching.

Adams doesn't specifically mention a cylindrical gasket and tubular body within double walls.

However, Adams teaches in figs 4-6 interior edges to the spherical surface of the transducer; a cylindrical portion [see fig 11].

However, Mayol et al teach in Figs 3-4 show the double walls (envelope and housing) and cylindrical gasket and the radial flange.

Therefore, one with ordinary skill in the art at the time the invention was made would have been motivated to combine Adams with Mayol et al references; for the purpose of enabling the surface to maintain a good position.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOEL F. BRUTUS whose telephone number is (571)270-3847. The examiner can normally be reached on Mon-Fri 7:30 AM to 5:00 PM (Off alternative Fri).

Art Unit: 3768

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. F. B./
Examiner, Art Unit 3768

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768